



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup> : <b>G06F 17/60</b>	<b>A2</b>	(11) International Publication Number: <b>WO 00/21011</b> (43) International Publication Date: 13 April 2000 (13.04.00)
<p>(21) International Application Number: PCT/US99/23223</p> <p>(22) International Filing Date: 4 October 1999 (04.10.99)</p> <p>(30) Priority Data: 09/165,352 2 October 1998 (02.10.98) US</p> <p>(71) Applicant: INDYMAC, INC. [US/US]; 155 North Lake Avenue, Pasadena, CA 91101 (US).</p> <p>(72) Inventors: NISHITH, Sharad; 1120 N. Rose Avenue, Pasadena, CA 91107 (US). GARG, Gulshan; 1036 Thornwood Street, Glendale, CA 91206 (US).</p> <p>(74) Agents: GARRETT, Arthur, S. et al.; Finnegan, Henderson, Farabow, Garrett &amp; Dunner, L.L.P., 1300 I Street, N.W., Washington, DC 20005-3315 (US).</p>	<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> <i>Without international search report and to be republished upon receipt of that report.</i></p>	
<p>(54) Title: SYSTEM AND METHOD FOR PROCESSING LOANS</p> <p>(57) Abstract</p> <p>A system and method for electronically processing loan data uses a graphical user interface that imports data from a loan origination software (LOS) system onto a local terminal and transfers the data to a remote location for processing. The loan imported from the LOS system is initially validated for completeness before being transferred to the remote location. The loan data is processed to generate a loan price and multiple pricing scenarios for the loan. This information is sent back to the local terminal for acceptance. Once accepted, the loan can be rate-locked for a specified period of time.</p>		

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## SYSTEM AND METHOD FOR PROCESSING LOANS

Background of the Invention

The present invention relates generally to loan processing systems and, more particularly, to a system and method for processing loan data using a graphical user interface to import data from a loan origination system and transfer the data to a remote server for processing.

Currently, there is an increasing demand on lending institutions to process loans. This demand is presumably a result of the rising number of people applying for home mortgage loans, more favorable refinancing terms, automobile loans, credit card consolidation loans, and other types of loans to purchase products or services. Typically, the loan approval process requires a considerable amount of time involving extensive research of a borrower's financial history, credit rating, and other variables. This time involvement is certainly significant for mortgage loan approval.

Traditional mortgage transactions typically begin with a consumer approaching a mortgage broker for a loan. The consumer provides basic information about themselves (employment, income, assets, liabilities), the subject property, and the desired loan. This information is gathered on a standard loan application form. The broker enters this data into various loan origination software (LOS) systems for storage and printing purposes. Once the data entry is complete, the broker assembles a credit package and sends it to one or several lenders for consideration. This package may include the loan application, a credit report obtained by the broker, documentation regarding the borrower's income, employment and assets, and an appraisal of the property to be purchased/refinanced.

Upon receiving the package, one of the lender's underwriters reviews it. The underwriter makes a decision to approve or deny the loan request based on the borrower's credit worthiness, capacity to pay, and collateral. Once the underwriter has reviewed these criteria, he sends a notice to the broker regarding loan approval. If the loan is denied, the underwriter sends an explanation for this decision. The underwriter may also "suspend" the loan, meaning they will withhold final judgment until additional documentation has been provided. Alternatively, the underwriter may approve the loan and inform the broker of this decision.

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If the loan is approved, the broker calculates the loan price offered by the lender. This calculation involves reviewing a rate sheet received daily from the lender. This rate sheet offers a standard price based on the loan's interest rate along with various pricing adjustments based on particular loan categories. After reviewing the rate sheet, the broker calls the lender's "ratelock desk." He describes the loan's characteristics to a ratelock desk member who "locks in the price" for a particular period of time and sends the broker a ratelock confirmation. Once the loan is approved and ratelocked, the broker works with a document preparation company to prepare the closing loan documents. Subsequently, the broker delivers the closing loan documents to an escrow company for execution by the borrower(s). This entire process generally takes at least six weeks.

The traditional mortgage loan process described above is very cumbersome. Consequently, many investors have developed software-based systems that automate certain stages of the loan approval process. These systems include Government Sponsored Entity (GSE) automated underwriting systems (e.g., Freddie Mac's Loan Prospector™ and Fannie Mae's Desktop Underwriter™).

A mortgage transaction involving the aforementioned GSE automated underwriting systems begins in the same manner as the traditional process--a consumer approaching a mortgage broker in need of a loan. The consumer provides basic information about themselves (employment, income, assets, liabilities), the subject property, and the desired loan. This information is gathered on a standard loan application form. Once the application is complete, the broker assembles a credit package and sends it to a lender. This package may include the loan application, a credit report obtained by the broker, documentation regarding the borrower's income, employment and assets, and an appraisal of the property to be purchased/refinanced.

At this stage in the loan approval process, the GSE automated underwriting system becomes involved. Upon receiving the credit package, the lender enters loan data into the GSE automated underwriting system software installed on their local workstation. The loan data is processed through an automated underwriting engine which provides a quick loan approval decision and generates documentation requirements for the loan. Once the automated underwriting engine processes the loan, the lender sends a notice to the broker

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regarding loan approval. If the loan is approved, the broker calculates the loan price being offered by the lender. This calculation involves reviewing a rate sheet received daily from the lender. After reviewing the rate sheet, the broker calls the lender's "ratelock desk" and describes the loan's characteristics to a ratelock desk member who "locks in the price" for a particular period of time. The ratelock desk sends confirmation to the broker for the ratelock price. Once the loan has been approved and ratelocked, the broker works with a document preparation company to prepare the closing loan documents. Subsequently, the broker delivers the prepared closing documents to an escrow company for execution by the borrower(s). Although parts of the GSE system loan approval process are automated, the process still requires a significant amount of human involvement and cost. Therefore, it is desirable to have a complete automated loan approval system and method that provides fast and accurate loan approval decisions at a minimal cost.

### Summary of the Invention

A system and method consistent with the present invention provides an improved loan processing system as compared to both the traditional and the GSE loan processing systems. The improved loan processing system described herein begins with a consumer approaching a mortgage broker for a loan, similar to the initial stages of the traditional and GSE loan processing systems. The consumer provides basic information about themselves (employment, income, assets, liabilities), the subject property, and the desired loan. This information is gathered on a standard loan application form and entered into various LOS systems for the storage and printing purposes.

At this stage, the improved loan processing system differs from the traditional and GSE systems in a variety of ways. First, while the GSE systems generally reside on lenders' workstations, the improved loan processing system resides on brokers' workstations. Moreover, the improved loan processing system has the ability to import data from select LOS systems. Thus, a broker can electronically import single and multiple loan files from their LOS system into their improved loan processing system, which then validates the loan files for completeness, and prepares the loan files for submission.

During the submission process, no paperwork is exchanged between the broker and lender. With the click of a button, the broker submits the loan(s) for an underwriting and pricing decision via a modem or the Internet to a remote server for processing. The remote server then pulls a credit report electronically, processes the loan data, and sends a decision back to the broker, thereby eliminating the need for rate sheets. This decision includes a quick approval, a loan price and multiple pricing scenarios.

By providing multiple pricing scenarios, the time involved in finalizing a loan price is significantly decreased. Typically, the process of choosing a loan price involves constant negotiation between the borrower and broker. During these price negotiations the price often fluctuates depending on several key loan characteristics (e.g., interest rate, size of down payment, loan purpose, etc.). The improved loan processing system provides pricing scenarios based on variations in these key loan characteristics. Using these scenarios, a broker can more efficiently work with a borrower to agree on a final price.

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Brokers, working with borrowers, can select one of the pricing scenarios provided up-front or re-submit the loan information with completely different loan characteristics.

If the broker wants to "lock in the price" of an approved loan, he can do so electronically with the click of a button, thus eliminating the need for a phone call or human interaction. In addition, a broker can extend and cancel ratelocks electronically. The process of submitting and ratelocking a loan provided above can be completed in ten minutes or less with the improved loan processing system.

With regard to processing physical loan files, the improved loan processing system provides additional functionality as well. Physical files delivered to a lender may be missing necessary documentation. If so, "suspense conditions" are often put on the file, and the broker is notified that he needs to fulfill these conditions. In the traditional and GSE loan approval processes, lenders must mail or fax these suspense conditions to brokers. The improved loan processing system allows a broker to view these loan suspense conditions from their desktop software.

Further, in the traditional and GSE loan approval processes, a lender has no way of identifying how many files will be arriving on a given day. As a result, the number of incoming files may far exceed allocated staff resources. The improved loan processing system, however, allows brokers to provide advance warning to lenders electronically, prior to sending a physical file. By using this improved loan processing system, a lender can allocate staff resources accordingly.

Finally, the improved loan processing system can significantly reduce document preparation time by allowing brokers to prepare loan documents and deliver them to an escrow company via the Internet. This feature also allows an escrow company to better track incoming files for mortgage loan closings.

The improved loan processing system implements the foregoing features through a method for electronically processing loan data for one or more loans which comprises the steps of importing loan data from a loan origination system into a local environment using a graphical user interface; transferring the loan data to a remote environment; processing the loan data at the remote environment to produce an output regarding the loan being processed; and sending the output to the local environment.

A system for electronically processing loan data for one or more loans comprises means for importing loan data from a loan origination system into a local environment using a graphical user interface; means for transferring the loan data to a remote environment; means for processing the loan data at the remote environment to produce an output regarding the loan being processed; and means for sending the output to the local environment.

Both the foregoing general description and the following detailed description are exemplary and explanatory and are intended to provide further explanation of the invention as claimed.

#### Brief Description of the Drawings

The accompanying drawings, which are incorporated in and constitute a part of the specification, illustrate presently preferred embodiments of the invention and, together with the preceding general description and the following detailed description, explain the principles of the invention.

In the drawings:

Fig. 1 illustrates a loan processing system consistent with the present invention;

Fig. 2 illustrates a flowchart of a method for processing loan data consistent with the present invention;

Fig. 3 illustrates a graphical user interface for accessing a loan processing system consistent with the present invention;

Fig. 4 illustrates a graphical user interface for selecting loan data;

Fig. 5 illustrates a graphical user interface for searching stored loan data;

Fig. 6 illustrates a graphical user interface for displaying loan data relating to loan terms, loan purchase, and a borrower's residence;

Fig. 7 illustrates a graphical user interface for displaying loan data relating to a borrower's finances;

Fig. 8 illustrates a graphical user interface for displaying loan data relating to transactional information;



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Fig. 9 illustrates a graphical user interface for displaying loan data relating to underwriting and transmittal information;

Fig. 10 illustrates a graphical user interface for displaying loan data relating to mortgage information;

Fig. 11 illustrates a graphical user interface for displaying loan data relating to loan pricing and approval;

Fig. 12 illustrates a graphical user interface for displaying loan data relating to loan submission guidelines;

Fig. 13 illustrates a graphical user interface for displaying credit report data;

Fig. 14 illustrates a graphical user interface for displaying loan suspense information;

Fig. 15 illustrates a graphical user interface for locking in a loan rate;

Fig. 16 illustrates a graphical user interface for displaying an advance warning regarding a loan;

Fig. 17 illustrates a graphical user interface for selecting a loan report;

Fig. 18 illustrates a graphical user interface for generating a loan report;

Fig. 19 illustrates a graphical user interface for generating loan pricing and rate lock information;

Fig. 20 illustrates a graphical user interface for generating document requirements;

Fig. 21 illustrates a graphical user interface for generating loan suspense information; and

Fig. 22 illustrates a flowchart of a method for processing loan data received from a source.

Detailed Description of the Invention

Systems and methods consistent with the present invention use an automated process to determine whether to approve or deny a loan. Initially, loan processing software generates a graphical user interface in a client environment to import, validate, and prepare loan data from a LOS system for transfer to a remote server environment for processing. The remote server environment includes multiple servers for processing the loan data based on services associated with the loan (*e.g.*, credit, risk, underwriting, etc.). An output is generated upon completion of the loan data processing (*e.g.*, approval with loan pricing scenarios or disapproval of the loan). The output is sent to the client environment for consideration and approval. Once approved, a loan price may be rate-locked for a predetermined period of time at the request of a user (*e.g.*, borrower).

Fig. 1 illustrates a loan processing system 100 consistent with the present invention. Loan processing system 100 is an automated system configured to process any type of loan data including loan data relating to mortgages, personal loans, and automobile/boat loans. One skilled in the art should recognize that loan processing system 100 illustrated in Fig. 1 may have a different configuration and include additional components not shown or discussed herein, but are consistent with the present invention. As illustrated in Fig. 1, loan processing system 100 includes a client environment 105 and a server environment 110 connected by one or more communication channels 115. Client environment 105 includes a computer system configured to permit a user (*e.g.*, mortgage broker) to receive, validate, prepare, and transfer loan data to a remote server environment for processing. To facilitate this operation, client environment 105 includes a processor 120, input/output devices 125, and a memory 130.

Processor 120 is a high-speed processor, such as an Intel Pentium® processor, capable of processing textual and graphical information. Processor 120 sends information to and receives information from input/output devices 125 to enable user interaction. Input/output devices 125 may include a keyboard, mouse, microphone, monitor, speaker, and other components that support user interaction. Processor 120 also sends information to and receives information from memory 130. Preferably, memory 130 is random access memory (RAM) located in a housing with processor 120 or in an external unit (not shown).

Memory 130 stores data and software implemented by processor 120. Specifically, memory 130 stores loan processing software 131, such as electronic - Mortgage Information Transaction System (e-MITS™) software developed by IndyMac, Inc. of Pasadena, California, and client software 133. Loan processing software 131 is a program that generates a graphical user interface to support user interaction and provide loan processing functionality in client environment 105. Client software 133 includes communication software for transferring data between client environment 105 and server environment 110. One skilled in the art will appreciate that memory 130 may store additional software programs as necessary to perform desired functions in client environment 105 consistent with the present invention.

Client environment 105 is configured to communicate with a LOS system 135 (*e.g.*, Contour Loan Handler™ and Calyx Winpoint™) through a datastore 140 to import loan data for processing. LOS systems typically include a software program that allows a user to enter in borrower information and other data. The entered data is stored in datastore 140. Loan processing software 131 serves as a bridge between LOS system 135 (through datastore 140) and server environment 110 to provide preliminary loan processing and validation. A method for loan processing using LOS system 135, datastore 140, and loan processing software 131 consistent with the present invention is described below with respect to FIG. 2.

Server environment 110 is a central loan processing environment configured to process multiple loan requests from multiple client environments. Server environment 110 processes each request and computes an output (*e.g.*, approval or disapproval of loan, loan pricing scenarios, etc). Once computed, the output is transferred to the requesting client environment.

Preferably, server environment 110 includes six individual servers configured to perform a specific task in the loan approval process. The six servers are connected to each other in a way that supports pipeline processing. That is, the individual servers process a loan in a pre-defined order. Pipeline processing allows the output of one server to be fed into one or more subsequent servers. These servers include a dispatcher server 145, a pre-processor server 150, a credit server 155, a risk grade server 160, an underwriting server

165, and a pricing server 170. Dispatcher server 145 assigns each server a task. In addition, each server includes a user interface for displaying the status of loans and server performance information throughout the loan approval process. The servers of server environment 110, illustrated in Fig. 1, provide the necessary functionality to implement methods consistent with the present invention described herein. One skilled in the art will appreciate, however, that servers or other components may be added or removed from server environment 110, as necessary, to conform to a specific user environment.

Dispatcher server 145 receives loan data from a requesting source (e.g., client environment 105), routes the loan data within server environment 110 to other servers, and transfers an output regarding loan approval to the requesting source. Dispatcher server 145 can communicate directly with any of the servers in server environment 110. This server includes a queue 146 for receiving data, a processor 147 for processing the received data, and a memory 148 for storing data. As illustrated in Fig. 1, memory 148 stores dispatcher server software 149, which is implemented by processor 147 to perform dispatcher server 145 functions described in detail below.

Pre-processor server 150 prepares the loan data for processing and computes a loan-to-value (LTV) ratio and a total loan-to-value (TLTV) ratio. This server includes a queue 151 for receiving data from dispatcher server 145, a processor 152 for processing the received data, and a memory 153 for storing data. As illustrated in FIG. 1, memory 153 stores pre-processor server software 154, which is implemented by processor 152 to perform pre-processor server 150 functions described in detail below.

Credit server 155 uses the borrower's name, social security number, and address to obtain a credit report and to generate a decision from FICO scores and raw credit data. This server includes a queue 156 for receiving data from dispatcher server 145 and/or pre-processor server 150, a processor 157 for processing the received data, and a memory 158 for storing data. As illustrated in FIG. 1, memory 158 stores credit server software 159 which is implemented by processor 157 to perform credit server 155 functions described in detail below.

Risk grade server 160 receives loan data and credit score information from dispatcher server 145 and credit server 155. Using this data and information, risk grade

server 160 generates a risk grade for the loan, including loss coverage estimates, and computes subordination levels. Subordination levels reflect the cash flow for a loan that contributes to each class of securities in a pool (*e.g.*, the higher the subordination level, the riskier the loan). Risk grade server 160 includes a queue 161 for receiving data, a processor 162 for processing the received data, and a memory 163 for storing data. As illustrated in FIG. 1, memory 163 stores risk grade server software 164, which is implemented by processor 162 to perform risk grade server 160 functions described in detail below.

Underwriting server 165 receives loan and risk grade data from dispatcher server 145 and/or risk grade server 160 to determine underwriting guidelines and documentation requirements for the loan. This server includes a queue 166 for receiving the loan and risk grade data, a processor 167 for processing the received data, and a memory 168 for storing data. As illustrated in Fig. 1, memory 168 stores underwriting server software 169, which is implemented by processor 167 to perform underwriting server 165 functions described in detail below.

Pricing server 170 uses subordination levels and loan and risk grade data to generate pricing scenarios for the loan. This server includes a queue 171 for receiving data, a processor 172 for processing the received data, and a memory 173 for storing data. As illustrated in FIG. 1, memory 173 stores pricing server software 174, which is implemented by processor 172 to perform pricing server 170 functions described in detail below.

Server environment 110 is configured to communicate with external resources 180 (*e.g.*, credit reporting agencies) to send and receive information used in the loan approval process. This communication can be accomplished using any communication medium capable of transferring data, including public telephone lines or dedicated communication circuits.

Client environment 105 and server environment 110 are connected by communication channel 115, which is a wireline channel supported by any capable communication medium. Communication channel 115 can be a wide area network or a local area network that supports the transfer of data signals (*e.g.*, Internet, telephone, etc.).

Although not illustrated in Fig. 1, communication channel 115 can also support multiple client and server environments to implement the loan processing systems and methods described herein.

Fig. 2 illustrates a flowchart of a method for processing loan data consistent with the present invention. The method begins with the step of importing and verifying loan data in client environment 105 for a single loan or multiple loans using loan processing software 131 (step 200). Preferably, loan processing software 131 imports the loan data from a LOS system datastore into a graphical user interface implemented by processor 120 in client environment 105. Loan processing software 131 validates the loan data (*i.e.*, ensures loan data is complete) and saves it in a local datastore for subsequent transmission to server environment 110 (step 210). If the loan data pertains to a single loan, the time between saving and transmission can be virtually instantaneous. The user, however, may wish to submit loan data for a number of loans as a batch at the end of the business day to reduce communication costs. In this instance, the user holds the multiple loan data in a batch until a specified time (step 220).

At the appropriate time, the loan data is transmitted to server environment 110 as a single loan or a batch of loans (step 230). Server environment 110 receives the loan data for each loan and processes the loan data in accordance with the services associated with each loan (step 240). After processing the loan data, server environment 110 determines whether to approve or not approve the loan (step 243). If the loan is not approved, an output indicating this fact is sent to client environment 105 along with reasons for the disapproval (step 247). If the loan is approved, pricing server 170 generates an output, which includes a loan price, and sends it to client environment 105 for approval (step 250).

At this point, the user of client environment 105 can decide whether the loan price is satisfactory (step 260). If not, the user can modify or correct the loan data, where appropriate, and save it in local datastore 140 (step 270). The user then transmits the modified loan data to server environment 110 for processing. If the loan price is satisfactory for a single loan, the user can request a rate-lock from server environment 110 (step 280), which is only available for a single loan. This guarantees the user a certain loan price for a specified period of time. The foregoing method may be repeated as necessary to

process additional loan data for a single loan or a batch of loans. An example of loan processing software 131 implemented in client environment 105 consistent with the present invention is described in detail with respect to Figs. 3-21 and software implemented on the servers in server environment 110 is described in detail with respect to Fig. 22.

Figs. 3-21 illustrate different screens of a graphical user interface generated by loan processing software 131 consistent with the present invention. The software shown in these figures is e-MITS. One skilled in the art will appreciate that e-MITS is described in Figs. 3-21 merely as an example of loan processing software consistent with the present invention.

When loan processing software 131 is first executed on processor 120, an access screen 300 is generated, as shown in Fig. 3. This screen requires the user to enter a name and a password. Once access is granted, loan processing software 131 generates a screen 400 for selecting loan data, as shown in Fig. 4. This display allows the user to select all loans, loans new to loan processing software 131, loans waiting submission, loans submitted to server environment 110, loan decisions received from server environment 110, loans rate-locked with server environment 110, and canceled loans. Once selected, the loan data for the selected loan is imported into the graphical user interface of loan processing software 131.

Fig. 5 illustrates a screen 500 for searching selected loan data stored in memory 130 or datastore 140. Because all loans were selected in the previous screen of Fig. 4, screen 500 lists loan data in a spreadsheet for all borrowers listed in memory 130 or datastore 140. This screen displays the borrower's name, client environment loan number, address, server environment loan number, and loan state. Column headers for these categories may differ from the column headers in LOS system 135. Moreover, this screen may be configured to include more or less information as desired. In addition, if using a mouse, a user can click the right button of the mouse to generate a pop-up menu (not shown) on the screen that provides the user with a list of functions (e.g., OPEN, SORT, TRANSMIT, RECEIVE, etc.).

Fig. 6 illustrates a screen 600 for entering or displaying loan data associated with a single loan selected from the previous screen. This screen allows the user to enter data

directly into the graphical user interface or display data imported from LOS system 135 via datastore 140. The screen includes loan data pertaining to the type and terms of a loan (*i.e.*, 30-year fixed mortgage), property information and purpose of loan, and borrower's information. The loan data is displayed in fields and may be modified by a user.

Fig. 7 illustrates a screen 700 for showing financial loan data of the borrower. Specifically, Fig. 7 shows loan data relating to monthly income and combined housing expense information of the borrower as well as liquid asset and liability data. The user can enter data into this screen or modify data imported from LOS system 135 via datastore 140.

Fig. 8 illustrates a screen 800 for showing loan application information relating to transactional information. As with the previous screens, the user can enter new data or modify data imported from LOS system 135 via datastore 140.

Fig. 9 illustrates a screen 900 for displaying loan data relating to underwriting and transmittal information. Specifically, screen 900 includes fields for borrower and property information, mortgage information, additional delivery data, and underwriting information. As with the previous screens, the user can enter new data or modify data imported from LOS system 135 via datastore 140.

Fig. 10 illustrates a screen 1000 for displaying loan data relating to mortgage information and other data relating to the loan. This data includes mortgage insurance data, rate-lock information, and "buy down" data. As with the previous screens, the user can enter new data or modify data imported from LOS system 135 via datastore 140. The user can transmit the loan data imported and validated by loan processing software 131 to server environment 110 after completing this screen or screen 900.

Fig. 11 illustrates a screen 1100 for showing a decision regarding loan pricing and approval generated by server environment 110. If the loan is eligible for purchase and loan guidelines are satisfied, this screen will include fields for loan price, pricing date, a matrix of pricing scenarios, and lender guidelines (*e.g.*, IndyMac guidelines). The user can also determine the status of a loan from this screen. If the loan is under review and guidelines are not yet satisfied, screen 1100 will show a field for guideline violations and explanations for why the guidelines are not met.



Fig. 12 illustrates a screen 1200 for displaying loan data relating to loan submission guidelines. Specifically, this screen shows a guidelines category and a description for each category. For each category (*e.g.*, standard, legal, credit), this screen identifies additional information required by the lender to issue the loan. From this screen, the user also has the option of viewing and printing a borrower's credit report and viewing loan suspense information as illustrated on screens 1300 and 1400 in Figs. 13 and 14, respectively.

Fig. 15 illustrates a screen 1500 for showing rate-lock information associated with the loan. This screen may be opened using a "Rate Lock" button illustrated in screen 1100 of Fig. 11. If a loan is eligible for purchase (*i.e.*, approved by a GSE), a user can rate-lock a loan price by entering the rate-lock contact name, phone number, and fax number. The user then receives a confirmation of the loan price from server environment 110. Once a loan is rate-locked, loan processing software 131 allows a user to extend the rate-lock period for at least one additional period.

Fig. 16 illustrates a screen 1600 for displaying an advance warning regarding the transfer of loan data from client environment 105 to server environment 110. Specifically, this screen allows the user to notify server environment 110 when documents from the physical loan file will be sent (*e.g.*, for data validation or funding). This screen can be opened from the "File" menu bar option (*e.g.*, shown in screen 1200 of Fig. 12) or by clicking on screen 500 of Fig. 5 using the right button of a mouse. To send an advance warning using this screen, the user enters the data validation date and/or funding package received date and selects the "Send" button. To send an advanced warning for another loan, the user selects the "Clear" button, enters the loan number, presses the ENTER key, and enters the appropriate information for the loan.

Fig. 17 illustrates a screen 1700 for allowing a user to print reports generated by loan processing software 131 or another source (*e.g.*, server environment 110). The user can select one or more reports from those listed on the screen by placing a checkmark in a box adjacent the desired report. As illustrated in Fig. 17, these reports include a loan registration report (*e.g.*, Loan Submission Schedule (LSS) Report in e-MITs), a pricing and rate-lock information report, documentation requirements report, and a loan suspense

report, as shown on screens 1800, 1900, 2000, and 2100 of Figs. 18, 19, 20, and 21, respectively.

Fig. 22 illustrates a flowchart of a method for processing loan data in server environment 110. As illustrated in Figs. 3-21, the user is able to interact with the server environment by sending and receiving loan data, loan decision information, loan eligibility information, loan pricing calculations, and other criteria. To generate this information, server environment 110 includes a multitude of servers, as discussed above with respect to Fig. 1, that perform different automated services throughout the loan approval process. The method begins with dispatcher server 145 of Fig. 1 implementing dispatcher software 149 to check its queue for loan data, including the loan number, received from a client environment or other source (step 2200). This step further includes determining services requested with the loan data and sending the loan data to the servers that perform the requested services, starting with the closest server in the pipeline. Several dispatcher server 145 processes may be run simultaneously to expedite the loan approval process for multiple requests.

If pre-processing services are required, dispatcher server 145 sends the loan data to pre-processor server 150 (step 2210). This server implements pre-processor server software 154 to poll its queue for loan data and determine whether enough loan data is present for processing. If not, pre-processor server 150 notifies the loan source (*e.g.*, client environment 105) of the problem through dispatcher server 145. If enough loan data exists, step 2210 further includes computing LTV and TLTV, which are used in underwriting server 165. Additionally, pre-processor server 150 sends a request to pricing server 170 to compute a note rate from a requested loan data price, if required, using the computed LTV and TLTV.

Credit server 155 implements credit server software 159 to poll its queue for loan data and extract the borrower's name and social security number to obtain a credit report and a credit score (step 2220). To obtain a credit report, credit server sends a request for a credit report (using the loan data) over a communication channel to a credit reporting vendor (*e.g.*, Equifax). The credit reporting vendor locates one or more credit reports on the borrower from different bureaus and sends them to credit server 155. Preferably, the

credit reports include a credit score (e.g., FICO score) and are in a printable format.

Risk grade server 160 receives the loan data and credit score and executes risk grade server software 164 to determine a risk grade and a loss coverage estimate for the loan (step 2230). To determine these values, risk grade server 160 sends the loan data and credit score to a rating agency. However, risk assessment server 160 may use rating software in server environment 110 (e.g., Standard & Poor's LEVELS model software) to generate risk grade and loss coverage estimate values. A risk grade is an assessment of the relative risk of a loan with respect to the probability of default. A loss coverage estimate is a measure of the amount of credit protection, or credit enhancement, necessary to protect investors against losses under different economic scenarios.

Underwriting server 165 receives loan and risk data and implements underwriting server software 169 to provide automated underwriting decisions and documentation requirements (step 2240). Underwriting server 165 feeds information (e.g., risk grade and loan data) from its queue into an underwriting software application (e.g., Eclipse™), which checks the information against underwriting guidelines. If the loan meets the underwriting guidelines, underwriting server software 169 generates documentation requirements for the loan (e.g., "Please provide two years most recent W-2s and/or paystubs). Otherwise, underwriting server 165 will provide a reason why guidelines were not met by the borrower (e.g., "Maximum 105% LTV allows for all loans. Your loan has an LTV of 120%). Loan processing software 131 in client environment 105 will display the foregoing messages as part of the output results.

Pricing server 170 implements pricing server software 174 to determine the price of loans using risk grade, subordination levels, and loan data received in its queue (step 2250). Pricing server 170 uses real-time market data for certain benchmark securities to compute the price.

Server environment 110 can generate a loan approval decision and send it to client environment 105 in approximately ten minutes (step 2270). The loan approval decision is an output that indicates the loan is "eligible for purchase," "under review," or "rejected." If eligible for purchase, the user receives the price for the loan as submitted, pricing scenarios, and a list of loan packaging or submission guidelines. If the loan is under

review, the user receives the exact reason why the loan is under review. If the loan is rejected, reasons for the rejection are provided to the user.

Systems and methods described herein implement loan processing software in a client environment and utilize dedicated servers in a server environment to provide automated loan processing functionality for virtually every stage of the loan approval process. The loan processing systems and methods described herein further provide expeditious loan approval decisions at a minimal cost.

While there has been illustrated and described preferred embodiments and methods of the present invention, those skilled in the art will understand that various changes and modifications may be made, and equivalents may be substituted for elements thereof, without departing from the true scope of the invention.

In addition, many modifications may be made to adapt a particular element, technique or implementation to the teachings of the present invention without departing from the central scope of the invention. Therefore, this invention should not be limited to the particular embodiments and methods disclosed herein, but should include all embodiments falling within the scope of the appended claims.

What is Claimed is:

1. A method for electronically processing loan data for one or more loans.  
comprising the steps of:  
importing loan data from a loan origination system into a local environment using a graphical user interface;  
transferring the loan data to a remote environment;  
processing the loan data at the remote environment to produce an output regarding the loan being processed; and  
sending the output to the local environment.
2. The method of claim 1 further comprising the step of validating the imported loan data.
3. The method of claim 2 wherein the validating step includes the step of determining whether the imported loan data includes a minimum level of information to process.
4. The method of claim 1 wherein the transferring step includes the step of transferring data relating to a single loan.
5. The method of claim 1 wherein the transferring step includes the step of transferring data relating to a plurality of loans.
6. The method of claim 5 wherein the transferring step includes the step of waiting until a predetermined time to transfer data for the plurality of loans.
7. The method of claim 5 wherein the transferring step includes the step of waiting until a predetermined number of loans are ready for transfer before transferring the data for the loans.

8. The method of claim 1 wherein the processing step includes the step generating a loan purchase decision based on the loan data.
9. The method of claim 1 wherein the processing step includes the step of generating loan pricing information based on the loan data.
10. The method of claim 1 wherein the processing step includes the step of generating loan eligibility information based on the loan data.
11. The method of claim 1 further comprising the step of locking a loan price for a predetermined period of time.
12. The method of claim 11 further comprising the step of extending a locked loan price for an additional predetermined period of time.
13. The method of claim 1 further comprising the step of sending advance warning information from the local environment to the remote environment that indicates the subsequent transfer of a physical loan document therebetween.
14. The method of claim 1 further comprising the step of generating a loan suspense report at the local environment based on the output.

15. A method for electronically processing loan data for one or more loans in a local environment, comprising the steps of:
- importing loan data from a loan origination system into the local environment using a graphical user interface;
  - transferring the loan data to a remote environment for processing;
  - receiving an output from the remote environment indicating approval or disapproval of the loan based on the processed loan data; and
  - fixing a loan rate with the remote environment based on the processed loan data.
16. The method of claim 15 further comprising the step of validating the imported loan data.
17. The method of claim 16 wherein the validating step includes the step of determining whether the imported loan data includes a minimum level of information to process.
18. The method of claim 15 wherein the transferring step includes the step of transferring data relating to a single loan.
19. The method of claim 15 wherein the transferring step includes the step of transferring data relating to a plurality of loans.
20. The method of claim 19 wherein the transferring step includes the step of waiting until a predetermined time to transfer data for the plurality of loans.
21. The method of claim 19 wherein the transferring step includes the step of waiting until a predetermined number of loans are ready for transfer before transferring the data for the loans.

22. A method for electronically processing loan data for a loan received from a source, comprising the steps of:

- monitoring the receipt of the loan data from the source;
- determining whether the loan data is complete for processing;
- generating a credit score based on the loan data;
- analyzing the loan data and the credit score for a potential risk;
- developing documentation requirements for a loan based on the loan data and potential risk; and

pricing the loan based on a plurality of predetermined loan approval criteria including at least one of the loan data, credit score, potential risk, and documentation requirements.

23. The method of claim 22 wherein the developing step further includes the step of developing documentation requirements based on predetermined underwriting guidelines.

24. The method of claim 22 wherein the determining step includes the step of determining predetermined services associated with the loan data.

25. The method of claim 22 wherein the determining step includes the step of computing a loan-to-value ratio.

26. The method of claim 22 wherein the determining step includes the step of computing a total loan-to-value ratio.

27. The method of claim 22 further comprising the step of generating a loan decision output indicating whether to approve or disprove a loan.



28. A system for electronically processing loan data for one or more loans.  
comprising:

means for importing loan data from a loan origination system into a local environment using a graphical user interface;

means for transferring the loan data to a remote environment;

means for processing the loan data at remote environment to produce an output regarding the loan being processed; and

means for sending the output to the local environment.

29. The system of claim 28 further comprising means for validating the imported loan data.

30. The system of claim 29 wherein the validating means includes means for determining whether the imported loan data includes a minimum level of information to process.

31. The system of claim 28 wherein the transferring means includes means for transferring data relating to a single loan.

32. The system of claim 28 wherein the transferring means includes means for transferring data relating to a plurality of loans.

33. The system of claim 32 wherein the transferring means includes means for waiting until a predetermined time to transfer data for the plurality of loans.

34. The system of claim 32 wherein the transferring means includes means for waiting until a predetermined number of loans are ready for transfer before transferring the data for the loans.

35. The system of claim 28 wherein the processing means includes means for generating a loan purchase decision based on the loan data.

36. The system of claim 28 wherein the processing means includes means for generating loan pricing information based on the loan data.

37. The system of claim 28 wherein the processing means includes means for generating loan eligibility information based on the loan data.

38. The system of claim 28 further comprising means for locking a loan price for a predetermined period of time.

39. The system of claim 38 further comprising means for extending a locked loan price for an additional predetermined period of time.

40. A system for electronically processing loan data for a loan received from a source location, comprising:

- dispatching means for monitoring the receipt of the loan data from the source;
- pre-processing means for determining whether the loan data includes a required loan parameter for processing;
- credit means for generating a credit score based on the loan data;
- risk means for analyzing the loan data and the credit score for a potential risk;
- underwriting means for developing documentation requirements for a loan based on the loan data and the potential risk; and
- pricing means for pricing the loan based on a plurality of predetermined loan approval criteria including at least one of the loan data, credit score, potential risk, and documentation requirements.

41. The system of claim 40 wherein the dispatching means includes a server computer with a processor and a queue.

42. The system of claim 41 wherein the dispatching means includes means for checking the queue for loan data.

43. The system of claim 41 wherein the dispatching means includes means for determining whether a service is requested with the loan data.

44. The system of claim 41 wherein the dispatching means includes means for sending the loan data to a server providing the requested service.

45. The system of claim 40 wherein the pre-processing means communicates with the dispatching means and includes a server computer with a processor and a queue.

46. The system of claim 45 wherein the pre-processing means includes means for checking the queue for loan data.

47. The system of claim 45 wherein the pre-processing means includes means for computing a loan-to-value ratio.

48. The system of claim 45 wherein the pre-processing means includes means for computing a total loan-to-value ratio.

49. The system of claim 45 wherein the pre-processing means includes means for feeding pricing information to the pricing means.

50. The system of claim 40 wherein the credit means communicates with the dispatching means and includes a server computer with a processor and a queue.

51. The system of claim 50 wherein the credit means includes means for retrieving credit data from credit depositories.

52. The system of claim 50 wherein the credit means includes means for computing credit scores for the loan.

53. The system of claim 50 wherein the credit means includes means for generating a printable version of a credit report.

54. The system of claim 40 wherein the risk means communicates with the dispatching means and includes a server computer with a processor and a queue.

55. The system of claim 54 wherein the risk means includes means for determining a risk grade for the loan.

56. The system of claim 54 wherein the risk means includes means for computing a plurality of subordination levels.

57. The system of claim 40 wherein the underwriting means communicates with the dispatching means and includes a server computer with a processor and a queue.

58. The system of claim 57 wherein the underwriting means includes means for providing automated underwriting decisions.

59. The system of claim 57 wherein the underwriting means includes means for providing documentation requirements.

60. The system of claim 40 wherein the pricing means communicates with the dispatching means and includes a server computer with a processor and a queue.

61. A method for processing loan applications received at a server system connected to a network, the method comprising the steps, performed by the server system, of:

inputting a loan request including loan data corresponding to a loan;

inputting requester data including information identifying an entity seeking the loan;

accessing at least one database to verify at least a portion of the information identifying the entity;

providing an indication reflecting a loan approval or rejection based on the loan data and the requester data, including a loan rate;

determining a loan price indicating that the loan is eligible for purchase based on a predetermined set of criteria; and

inputting data indicating selection of the loan rate, wherein upon receipt of the loan rate selection data the loan rate is bid for a predetermined time.

62. The method of claim 61, wherein the method further comprises the step of:

permitting a user to monitor a status corresponding to the step of providing an indication reflecting a loan approval or rejection.

63. The method of claim 61, wherein the step of providing an indication reflecting a loan approval or rejection comprises the steps of:

determining from information related to the requester data a score reflecting the entity's ability to repay the loan;

determining a risk grade for the loan and subordination levels based on information from the loan data and the score; and

determining underwriting guidelines and documentation requirements for the loan based on the risk grade and information from the loan data.

64. The method of claim 61 wherein the step of providing an indication reflecting a loan approval or rejection comprises the step of;

selecting a loan rate based on a risk associated with the loan.

65. The method of claim 62, further comprising the step of:

providing a set of pricing scenarios for the loan, each scenario representing a different interest ratio, down payment, and loan program.

66. The method of claim 61, wherein the step of providing an indication reflecting a loan approval or rejection comprises the substep of:

determining documentation requirements associated with the loan when the indication reflects that the loan has been approved.

67. The method of claim 66, further comprising the step of:

generating closing documents associated with the loan; and

electronically transmitting the closing documents from the server system to a client system connected to the network.

68. A computer-implemented method for processing loan applications, the method comprising the steps of:

inputting into a computer system loan request including loan data corresponding to a loan;

inputting into the computer system requester data including information identifying an entity seeking the loan;

accessing at least one database to verify at least a portion of the information identifying the entity;

providing an indication reflecting a loan approval or rejection based on the loan data and the requester data, including a loan rate;

determining a loan price indicating that the loan is eligible for purchase based on a predetermined set of criteria; and

inputting into the computer system data indicating selection of the loan rate, wherein upon receipt of the loan rate selection data the loan rate is fixed for a predetermined time.

69. A method for processing loan applications by a computer system connected to a display screen, comprising:

permitting a user to input (i) a loan request including loan data corresponding to a loan, and (ii) requester data including information identifying an entity seeking the loan;

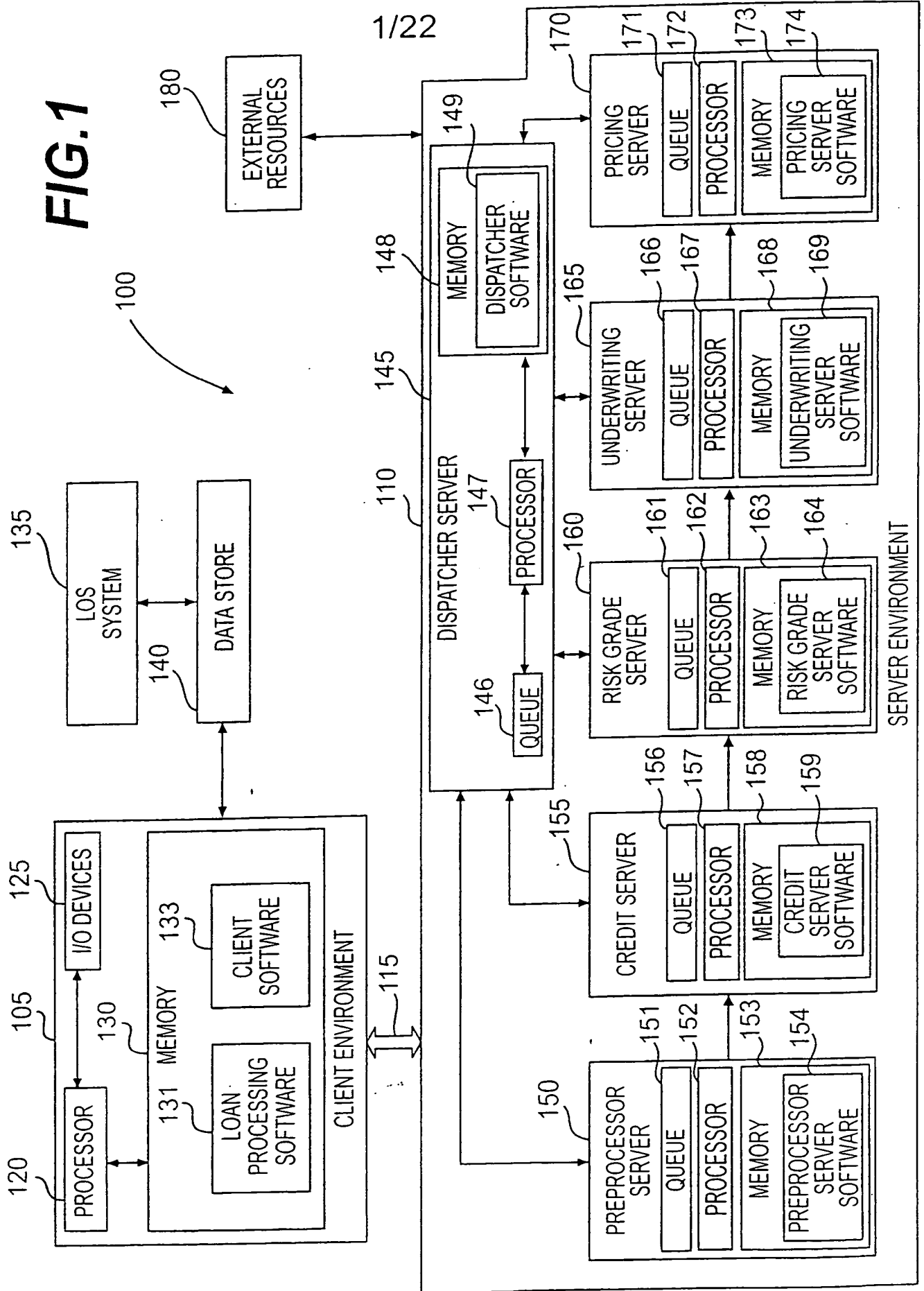
accessing at least one database to verify at least a portion of the information identifying the entity;

presenting a view on the display screen, including an indication reflecting a loan approval or rejection based on the loan data and the requester data, including a loan rate;

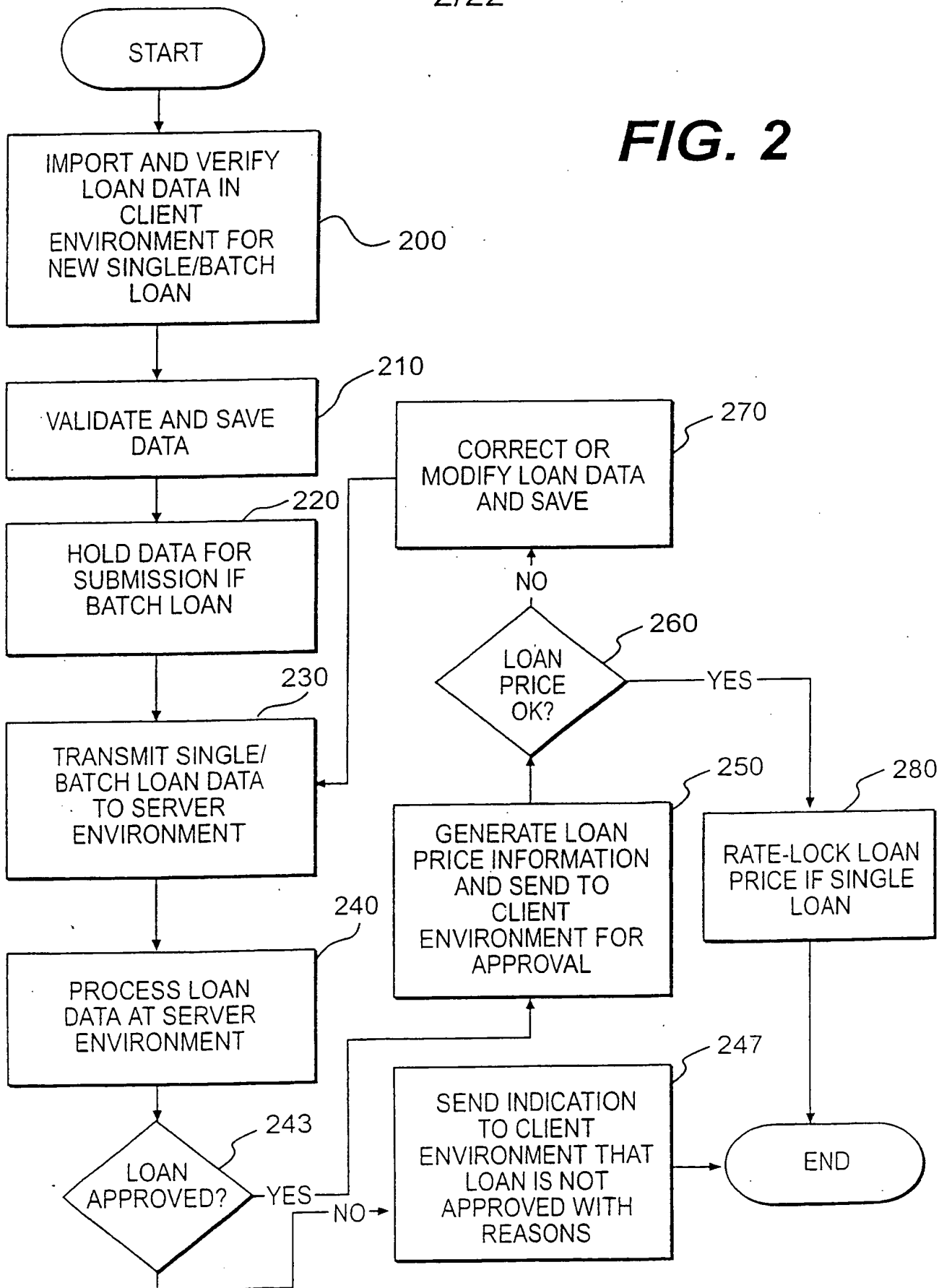
determining a loan price based on a predetermined set of criteria; and

permitting the user to input data indicating selection of the loan rate, wherein upon receipt of the loan rate selection data the loan rate is fixed for a predetermined time.

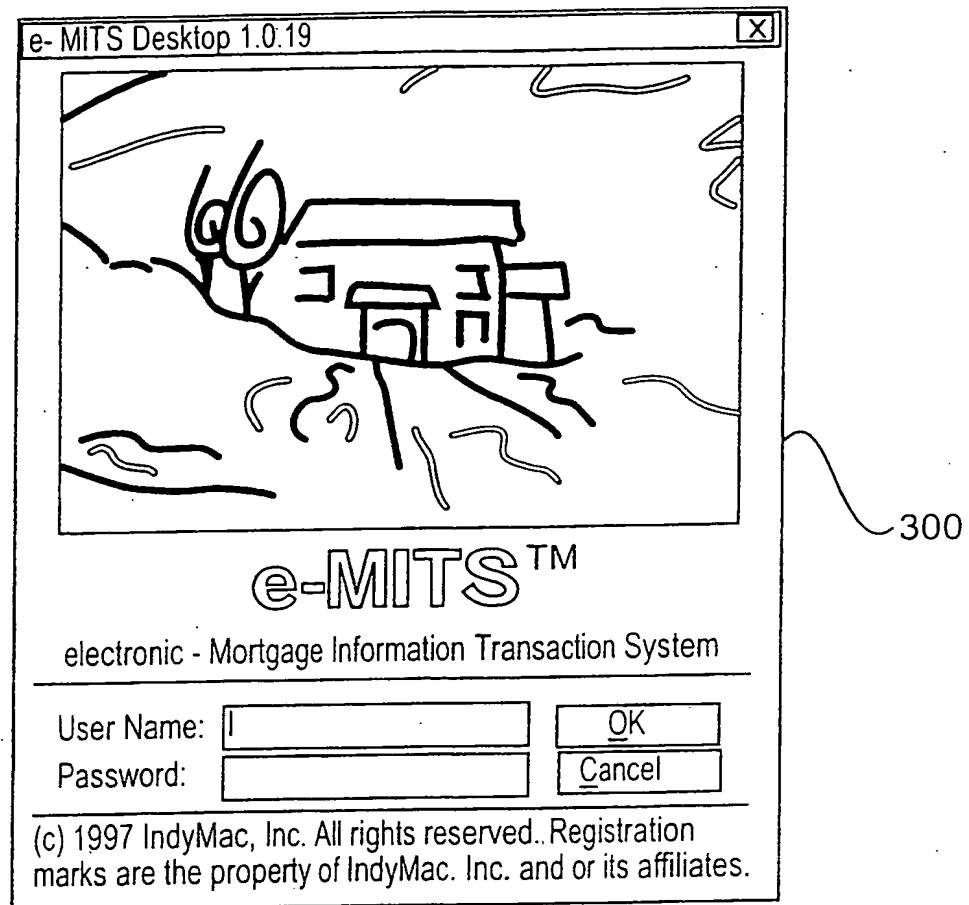




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**FIG. 2**

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**FIG. 3**

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File View Tools Help

Seller: 1978 - Indy Mac OK

# e-MITS

electronic - Mortgage Information Transaction System

Select Loans...

☒ All  
☐ New to e-MITS (not imported from Loan Handler)  
☐ Waiting Submission  
☐ Submitted to IndyMac  
☐ Received Decision from IndyMac  
☒ Eligible for Purchase  
☒ Under Review  
☐ Rate locked with IndyMac  
☐ Cancelled

Additional Select Criteria (Optional)

Borrower Last Name:

Loan Number:

Property Address:

OK

Ready  e1978e  Num  5/5/99 11:18:28 AM

FIG. 4

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e-MITS - Search Results				Seller: 1978 - Indy Mac OK	
File View Tools Help					
Last Name	First Name	Loan Number	Property Address	IndyMac Loan	State
<input type="checkbox"/>	SIMONYAN	95007.BRW	GARY BARSEGIAN		New to e-MITS
<input type="checkbox"/>	SIMONYAN	96014.BRW	GARY BARSEGIAN		New to e-MITS
<input type="checkbox"/>	SINANYAN	96004.BRW	GARY BARSEGIAN		New to e-MITS
<input type="checkbox"/>	Taylor	TTAYLOR.BRW	---		New to e-MITS
<input type="checkbox"/>	APARICIO	DAVID B. c324964_14	3907 LA CRESCENTA 328427		Rate Locked with IndyMac
<input type="checkbox"/>	APARICIO	DAVID B. c324964_15	3907 LA CRESCENTA 328428		Rate Locked with IndyMac
<input type="checkbox"/>	HORMOZIAN	EDWARD Loan1	19018 SHERMAN WA 324945		Received decision from IndyMac
<input type="checkbox"/>	APARICIO	DAVID B. c324964	3907 LA CRESCENTA 328438		Received decision from IndyMac
<input type="checkbox"/>	SINANYAN	RUZANNA c324961_6	1745 GLENWOOD RC 328442		Received decision from IndyMac
<input type="checkbox"/>	MAYAN	AKOP c328368_4	6051 VARNA AVENUE 328443		Received decision from IndyMac
<input type="checkbox"/>	BAZRKANIAN	KARAPET	339 CONCORD STRE 304453		Submitted to IndyMac
<input type="checkbox"/>	GASPARYAN	KARO asdf	1803 BEVERLY DRIVE 324930		Submitted to IndyMac
<input type="checkbox"/>	GOGADZE	ZHARMEN 654	1207 NORTH CHERO 324941		Submitted to IndyMac
<input type="checkbox"/>	GOUKASIAN	GOHAR asdf	8560 VINE VALLEY DI 324842		Submitted to IndyMac
<input type="checkbox"/>	MARTEL	JUDITH asdf	9664 TUJUNGA CANY 324933		Submitted to IndyMac

114 Matches Found 0 Loans Selected

Select loan(s) to process individually or by batch

Ready

Ready

Fig. 5.

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e-MTS - Loan Number c324964 14										<input type="button" value="X"/> <input type="button" value="OK"/>	
File View Tools Help											
								Loan: 1 of 1	Seller: 1978 - Indy Mac OK		
My Loan Number: c324964 14				IndyMac Loan Number: 328427				Borrowers: 2			
Loan Application		Underwriting and Transmittal Summary		Other Data		IndyMac Decision		Guidelines			
Page 1		Page 2		Page 3							
I. Type of Mortgage and Terms of Loan											
Loan Amount: \$11,550.00		Product: Fixed30		Interest Rates[%]: 7.25							
II. Property Information and Purpose of Loan											
Street:		City:		State:		Zip:					
Loan Purpose: Purchase		Occupancy: <input checked="" type="checkbox"/> Primary Residence		Existing Lien Amount: \$0.00							
III. Borrower Information											
Co-Borrower 1											
First Name:		Last Name:		Age: 24		No of Dependents: 0					
S.S.N.:		S.S.N.:		Marital Status:		No of Dependents:					
Present Address											
Own/Rent: <input checked="" type="checkbox"/> Rent		No. of Years: 10		Street:		City:		State:		Zip:	
Previous Address											
Street:		City:		State:		Zip:					
Self Employed <input type="checkbox"/> Curr. Job Years 15		Prev. Job Years 0		Self Employed <input type="checkbox"/> Curr. Job Years 8		Prev. Job Years 0					
Loan State Rate Locked with IndyMac											
e1978e		Num:		5/5/99 11:34:16 AM							

FIG. 6

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-700

e-MTS - Loan Number c324964_14										File View Tools Help		[X]	
My Loan Number: c324964_14		IndyMac Loan Number: 328427		Loan: 1 of 1		Seller: 1978 - Indy Mac OK		Borrowers: 2					
Loan Application		Underwriting and Transmittal Summary		Other Data		IndyMac Decision		Guidelines					
Page 1		Page 2		Page 3									
V. Monthly Income and Combined Housing Expense Information													
Self Employed Income:				Borrower				Co-Borrower 1					
Base Empl. Income:				\$0.00				\$0.00					
Overline:				\$2,402.00				\$1522.00					
Bonuses:				\$0.00				\$0.00					
Commissions:				\$0.00				\$0.00					
Dividends / Interest:				\$0.00				\$0.00					
Net Rental Income:				\$0.00				\$0.00					
Other Income:				\$0.00				\$0.00					
Total Income:				\$2,402.00				\$1522.00					
Current Monthly Housing Expenses:				\$400.00				\$400.00					
VI. Liquid Assets and Liabilities													
All Other Monthly Payments:				\$565.00				\$60.00					
Has Borrower listed any checking/savings account?				<input type="checkbox"/>				<input type="checkbox"/> Co. Borrower 1					
Depository Accounts (checking, savings, and money market):				\$2,692.15				\$1,153.00					
Gift Funds not yet deposited:				\$0.00				\$0.00					
Net proceeds from sale of home (actual or estimated):				\$0.00				\$0.00					
Retirement Accounts (IRA, 401K):				\$0.00				\$0.00					
Stocks and Bonds:				\$0.00				\$0.00					
Life Insurance Net Cash Value:				\$0.00				\$0.00					
Other Liquid Assets:				\$65,000.00				\$29,000.00					
Sub Total				\$67,692.15				Sub Total					
Liquid Assets:				\$67,692.15				Liquid Assets:					
								\$30,153.00					
Loan State Rate Locked with IndyMac													
e1978e										Num		5/5/99 11:34:16 AM	

FIG. 7

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e-MITS - Loan Number c324964 14										_ X			
File View Tools Help													
									Loan: 1 of 1			Seller: 1978 - Indy Mac OK	
My Loan Number: c324964...14				IndyMac Loan Number: 328427				Borrowers: 2					
Loan Application				Underwriting and Transmittal Summary				Other Data		IndyMac Decision			
Page 1				Page 2				Page 3					
VII. Details of Transaction													
Cash From Borrower:				\$2,984.02				Borrower					
Cash To Borrower:				\$0.00				Co-Borrower 1					
Gift Funds:				\$0.00									
[Both deposited and undeposited]													
Financing Commissions:				\$3,000.00									
Sales Commissions:				\$0.00									
[Final Commissions to Borrower]													
VIII. Declarations													
Have you been declared bankrupt within the past 7 years? <input type="checkbox"/>													
Have you had property foreclosed in the last 7 years? <input type="checkbox"/>													
Do you currently have a Federal Delinquency Loan? <input type="checkbox"/>													
Are you a U.S. Citizen? <input checked="" type="checkbox"/>													
Are you a permanent resident alien? <input type="checkbox"/>													
Do you intend to occupy the property as your primary residence? <input checked="" type="checkbox"/>													
Ownership interest in property in the last 3 years? <input type="checkbox"/>													
X. Information for Government Monitoring Purposes													
Borrower				Co-Borrower 1									
Race/National Origin:				White				Race/National Origin: Not provided					
Sex:				Male				Sex: Female					
Loan State Rate Locked with IndyMac													
e1978e										Num		5/5/99 11:34:16 AM	

FIG. 8



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e-MTS - Loan Number c324964 14		File View Tools Help	
My Loan Number: c324964...14	IndyMac Loan Number: 328427	Loan: 1 of 1	Seller: 1978 - Indy Mac OK
Loan Applications Underwriting and Transmittal Summary		Other Data	IndyMac Decision Guidelines
Borrowers: 2			
III. Underwriting Information			
I. Borrower and Property Information		LTV % 15.000	
Sale Price:	\$77,000.00	Stable Monthly Income	
Appraised Value:	\$77,000.00	Base Income \$3,924.00	
Property Type:	Low Rise Condo	Other Income \$0.00	
PLD Type [Attached / Detached]	<input type="checkbox"/>	Positive Cash Flow (object property) \$0.00	
Condo Classification:	None	Total Income [Per Month] \$3,924.00	
Condo Development Name:	Casa De La Verdugo	Qualifying Ratios	
II. Mortgage Information		Housing Ratio % 11.073	
Lien Position:	First	Total Expense % 27.001	
Subordinate Financing Amount:	\$0.00	Proposed Monthly Payments	
VI. Additional Delivery Data		Calculated PSI: \$78.79	
Final Payment Date	7-1-1998	Secondary Mortgage PSI: \$115.50	
Adjustable Rate Mortgages [ARM]		Hazard Insurance: \$0.00	
Original Interest Rate [%]	7.25	Taxes: \$80.21	
Gross Mortgage Margin [%]	0	Mortgage Insurance: \$0.00	
Initial Index Value [%]	0	Home-owner Association Fees: \$160.00	
Qualifying Interest Rate [%]	0	Lease/Ground Rent: \$0.00	
		Other: \$0.00	
		Total Proposed Housing Expense: \$434.50	
		Negative Cash Flow (subject property) \$0.00	
		Total All Other Payment: \$625.00	
		Total All Monthly Payments: \$1,059.50	
Loan State Rate Locked with IndyMac		e1978e	Num
		5/5/99 11:34:16 AM	

FIG. 9

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1000

File View Tools Help		My Loan Number: c324964_14		IndyMac Loan Number: 328427		Seller: 1978 - Indy Mac OK	
Loan Application		Underwriting and Transmittal Summary		Other Data		Borrowers: 2	
Documentation Type		Full/Alt Doc.		Rear Lock Period:		30	
Credit Report:		<input type="checkbox"/>		Rate Lock Type:		Best Efforts	
Decision Credit Score:		680		Prepay Primary Period [Years]		[none]	
Mortgage Insurance		<input type="checkbox"/>		UW Contact:		hi there	
N&MI Program:		<input type="checkbox"/>		Phone:		(777)777-7777	
MI Insurer:		<input type="checkbox"/>		Fax:		(121)212-1212	
PMI Level [%]		0		Buy Down			
MI Credit Status:		<input type="checkbox"/>		Temporary Subsidy Buydown:		<input type="checkbox"/>	
Underwriting Program:		Prior Approval		Initial Adjustment Period (Months):		0	
Division Type:		IndyMac Prime		Subsequent Adjustment Period Month:		0	
Transaction Type:		Servicing Released		Initial Adjustment [%]		0	
Loan Program:		Standard		Subsequent Adjustment [%]		0	
				Buydown Term [Months]		0	
				Qualifying Interest Rate [%]		0	
				Contributor:		<input type="checkbox"/>	
Last Checked By:		e1970e		Last Changed At:		4/28/98 9:59:22 AM	
Loan State Rate Locked with IndyMac		e1978e		Num		5/5/99 11:34:16 AM	

FIG. 10

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1100

e-MITS - Loan Number c324964 14										_ _ X																						
File View Tools Help																																
								Loan: 1 of 1			Seller: 1978 - Indy Mac OK																					
My Loan Number: c324964...14		IndyMac Loan Number: 328427		Borrowers: 2																												
Loan Application			Underwriting and Transmittal Summary			Other Data			IndyMac Decision Guidelines																							
Loan Price 95		Pricing Data: 4/30/98 10:15:45 PM		Guidelines Met																												
Decision Rate Lock Cancelled						<input checked="" type="radio"/> Yes																										
Submitted By: e1978e		At: 4/30/98 6:50:26 PM																														
<table border="1"> <thead> <tr> <th>LTV</th> <th>Note Rate</th> <th>Full Doc/Purchase</th> </tr> </thead> <tbody> <tr> <td>15.000</td> <td>7.250</td> <td>4.000</td> </tr> <tr> <td>15.000</td> <td>7.500</td> <td>3.000</td> </tr> <tr> <td>15.000</td> <td>7.750</td> <td>2.125</td> </tr> <tr> <td>10.000</td> <td>7.250</td> <td>4.000</td> </tr> <tr> <td>10.000</td> <td>7.500</td> <td>3.000</td> </tr> <tr> <td>10.000</td> <td>7.750</td> <td>2.125</td> </tr> </tbody> </table>												LTV	Note Rate	Full Doc/Purchase	15.000	7.250	4.000	15.000	7.500	3.000	15.000	7.750	2.125	10.000	7.250	4.000	10.000	7.500	3.000	10.000	7.750	2.125
LTV	Note Rate	Full Doc/Purchase																														
15.000	7.250	4.000																														
15.000	7.500	3.000																														
15.000	7.750	2.125																														
10.000	7.250	4.000																														
10.000	7.500	3.000																														
10.000	7.750	2.125																														
<p>This loan has been reviewed and priced by IndyMac's electronic system based solely upon the loan data received by IndyMac. This confirmation is conditional upon satisfactory completion of a streamlined data review by IndyMac, which will include, without limitation, a review of the borrower's income (if applicable) and assets (if applicable) and appraisal(s) of the subject property. The price and underwriting approval set forth herein are subject to change if IndyMac determines that any of the information upon which the price and/or approval are based is inaccurate. This is not a rate lock and the indicated price is subject to change without notice.</p>																																
Loan State Rate Locked with IndyMac										RATE LOCK																						
				e1978e		Num		5/5/99 11:34:16 AM																								

FIG. 11

12/22

1200

e-MITS - [Loan Number c324964 14]										_ □ X	
File View Tools Help											
							Loan: 1 of 1			Seller: 1978 - Indy Mac OK	
My Loan Number: c324964...14		IndyMac Loan Number: 328427		Borrowers: 2							
Loan Application		Underwriting and Transmittal Summary		Other Data		IndyMac Decision		Guidelines			
IndyMac Loan Submission Guidelines											
Response:											
Guidelines Met											
Print											
Category	Description										
Standard	<p>This loan has been processed by e-MITS Underwriting System as a Prime Loan.</p> <p>For data verification please provide the following documents Acco Fastened in a green colored folder. The right side of the folder to include labeled tabs in the following order:</p> <p>Legal, Credit, Verification, Appraisal, Title and Miscellaneous.</p> <p>Please place the appropriate documents behind each tab. Label the outside of the file as e-MITs and include IndyMac Loan Number.</p> <p>Please provide completed Loan Submission Schedule Form 5000.</p> <p>Please provide completed 1008 Transmittal Summary.</p> <p>Please provide completed typed 1003 Application.</p> <p>Please provide completed and signed Initial 1003 Application.</p> <p>Please provide Verification of Mortgage for all Mortgage liabilities which are not listed on the credit report.</p> <p>Verifications: Income; Please provide one current pay-stub which must contain year-to-date, bonus and overtime information.</p>										
Legal											
Credit											
Verifications: Income; Please provide one current pay-stub which must contain year-to-date, bonus and overtime information.											
<div> <div>View Credit Report</div> <div>Print Credit Report</div> <div>View Loan Suspense</div> </div>											
Loan State Rate Locked with IndyMac											
e1978e										Num	5/5/99 11:34:16 AM

FIG. 12

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e-MITS FEEDBACK	
LOAN NUMBER: 328427	PRIMARY BORROWER: DAVID B. APARICID
CREDIT REPORT	LOAN SUSPENSE
PRINT	
<div>REPORT NBR: 91278 REPORT TYPE: INFILE BUREAU(S): EFX/TU/TRW PRICE: 11.75 PAGE 1 OF 23</div> <div>LENDER S CREDIT 20929 VENTURA BLVD. SUITE 203 WOODLAND HILLS, CA 91364 PHONE (818)226-3700 FAX: (818)587-9587</div> <div>CUSTOMER NBR: IM5600 ORDERED ON: 04/15/98 INFILE DATE: 04/15/98 DATE COMPLETE: 04/15/98</div> <div>INDYMAC EMITS 23 PASADENA, CA 91101</div> <div>REFERENCE: 324938.1 PROPERTY ADDRESS:</div>	

**FIG. 13**

1300

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e-MITS FEEDBACK			
LOAN NUMBER: 297768		PRIMARY BORROWER: J. SHIRLEY BOTHUM	
		CLOSE	
CREDIT REPORT   LOAN SUSPENSE			
<input checked="" type="radio"/> ALL <input type="radio"/> OUTSTANDING		REFRESH	
ACTION	CATEGORY	CONDITION	TYPE
ACCEPTED	COMPLETE CLOSED LOAN PACKAGE	(#1) ALL ORIGINAL CLOSED LOAN DOCUMENTS AS SPECIFIED IN SECTION 2800 OF THE SELLER GUIDE AND INDYMAC FORM 5001 (OR FORM 5009 FOR COOPERATIVE UNIT LOANS).	PRE-FUNDING
ACCEPTED	1003/APPLICATION	(#2) MISSING TYPED, SIGNED, AND DATED LOAN APPLICATION.	PRE-FUNDING
ACCEPTED	SERVICING RELEASED DOCUMENTS	(#3) MISSING ALL DOCUMENTS FOR THE DELIVERY OF A SERVICING RELEASED LOAN. PLEASE REFER TO SECTIONS 2799 AND 2807A OF THE SELLER'S GUIDE FOR INSTRUCTIONS.	PRE-FUNDING
ACCEPTED	FLOOD DETERMINATION	(#4) MISSING INITIAL FLOOD DETERMINATION CERTIFICATE. NEED Cif TO DETERMINE FEMA ZONE.	PRE-FUNDING
ACCEPTED	SUBORDINATE FINANCING	(#5) TRUST DEED DATED 1/1/98 TO ADMINISTRATOR OF THE SMALL BUSINESS ADMINISTRATION IN AMOUNT OF \$32,200 TO BE SUBORDINATED.	PRE-FUNDING
ACCEPTED	TITLE	(#6) ASSURE LOAN CONSTITUTES A VALID FIRST LIEN ON THE SUBJECT PROPERTY.	PRE-FUNDING
ACCEPTED	e-MITS PRIOR-TO-DOC	(#7) CASH BACK TO BORROWER CANNOT EXCEED \$1,000.	PRE-FUNDING
7 RECORDS			
CHANGED BY: ASLAYTON		CHANGED AT: 3/18/98 9:01:00 AM	

1400

FIG. 14

15/22

RATE LOCK		X	
MESSAGE:			
RATE LOCK WAS SUCCESSFULLY CANCELLED WITH INDMAC			
CLOSE			
GENERAL:			
RATE LOCK NUMBER:	3105538	REFERENCE YIELD:	7.400
CONTACT NAME:	ASCIF	ORIGINAL RATE LOCK PERIOD:	30
CONTACT PHONE:	(465)454-6546	ORIGINAL RATE LOCK TYPE:	BEST EFFORTS
CONTACT FAX:	(654)654-5646	RATE LOCK NOW	
EXTENSION:			
NEW EXPIRATION DATE:	7-31-98	EXTENDED RATE LOCK PERIOD:	60
ORIGINAL EXPIRATION DATE:	6-1-98	EXTENDED RATE LOCK TYPE:	MANDATORY
FINAL PRICE:	95.000	EXTENDED RATE LOCK	
ORIGINAL PRICE:	96.000		
CANCELLATION:			
PAIROFF NUMBER:	3021725	PENALTY:	\$0.00
PAIROFF DATE:	4-30-1998	CANCEL RATE LOCK	
PAIROFF AMOUNT:	\$11,550.00		

FIG. 15

1500

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FIG. 16

1600

ADVANCE WARNING		[X]	
TYPE A LOAN NUMBER AND PRESS <ENTER>			
INDYMAN LOAN NUMBER:	328427		
DATA VALIDATION REC DATE:	-- --		
DATA VALIDATION REC ENTERED AT:			
DATA VALIDATION REC ENTERED BY:	e1978e		
FUNDING PKG REC DATE:	-- --		
FUNDING PKG REC ENTERED AT:			
FUNDING PKG REC ENTERED BY:	e1978e		
SEND		CLOSE	



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e-MITS REPORTS

SELECT THE REPORT(S) TO PRINT....

☒ LSS

☒ PRICING AND RATE LOCK INFORMATION

☒ DOCUMENT REQUIREMENTS

☒ LOAN SUSPENSE

PREVIEW

CANCEL

1700

**FIG. 17**

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IndyMac

e-MITS LSS Report

IndyMac Loan Number : 328427

Borrower: Seller: Indy Mac OK

Property Address: Seller Loan Number: c324964\_14

Submitted Data

Loan	7.250%	IndyMac Product Line: IndyMac Prime	Total Proposed Housing Exp: \$434.50
Interest Rate:	\$11,660.00	LTV: 15.000%	Total All Monthly Payment: \$1,059.50
Loan Amount:	\$77,000.00	Lien Position: First	Total Income: \$3,924.00
Sales Price:	\$77,000.00	No IIII Program:	Sub-Total Liquid Assets: \$97,845.15
Appraised Value:	Fixed30	Cash to Borrower:	Housing Ratio: 11.073
Loan Program:	Primary Residence		Total Expense Ratio: 27.001
Occupancy:	Purchase		
Loan Purpose:	Low Rise Condo		
Property Type:	Full/Alt Doc		
Doc Type:			
Borrower:			
Name:		Name:	
S.S.N.:		S.S.N.:	
Self Employed:		Self Employed:	

2 of 161 Total: 161 100%

FIG. 18

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1900

**IndyMac**

**e-MITS Pricing and Rate Lock Information**

IndyMac Loan Number: 328427      Borrower:

Seller Loan Number: c324964 14

**Pricing Scenario**

LTV	Note Rate	Full Doc/Purchase			
15.000	7.250	4.000			
15.000	7.500	3.000			
15.000	7.750	2.125			
10.000	7.250	4.000			
10.000	7.500	3.000			
10.000	7.750	2.125			

**Rate Lock**

Rate Lock Number: 3105538      Rate Lock Contact Name: Asdf

Rate Lock Type: Best Efforts      Rate Lock Contact Phone: (405)454-6546

Reference Yield: 7.400      Rate Lock Contact Fax: (854)654-5646

Rate Lock Original Price: 96.000      Loan Purpose: Purchase

Rate Lock Price Date/Time: 4/30/1998      Note Rate: 7.25%

Rate Lock Amount: \$11,550.000

Rate Lock Period: 30

**EXTENSION:**

Rate Lock Type: Mandatory      Payoff Number: 3021725

Original Expiration Date: 6/1/1998      Payoff Date: 4/30/1998

New Expiration Date: 7/31/1998      Payoff Amount: \$11,550.000

**CANCELLATION:**

1 of 1    < >    [Cancel]    [Close]

2 of 161    Total: 161    100%

**FIG. 19**

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2000

e-MITS Documentation Requirements
IndyMac

### e-MITS Documentation Requirements

IndyMac Loan Number: 328427

Seller Loan Number: c324964\_14

Borrower:

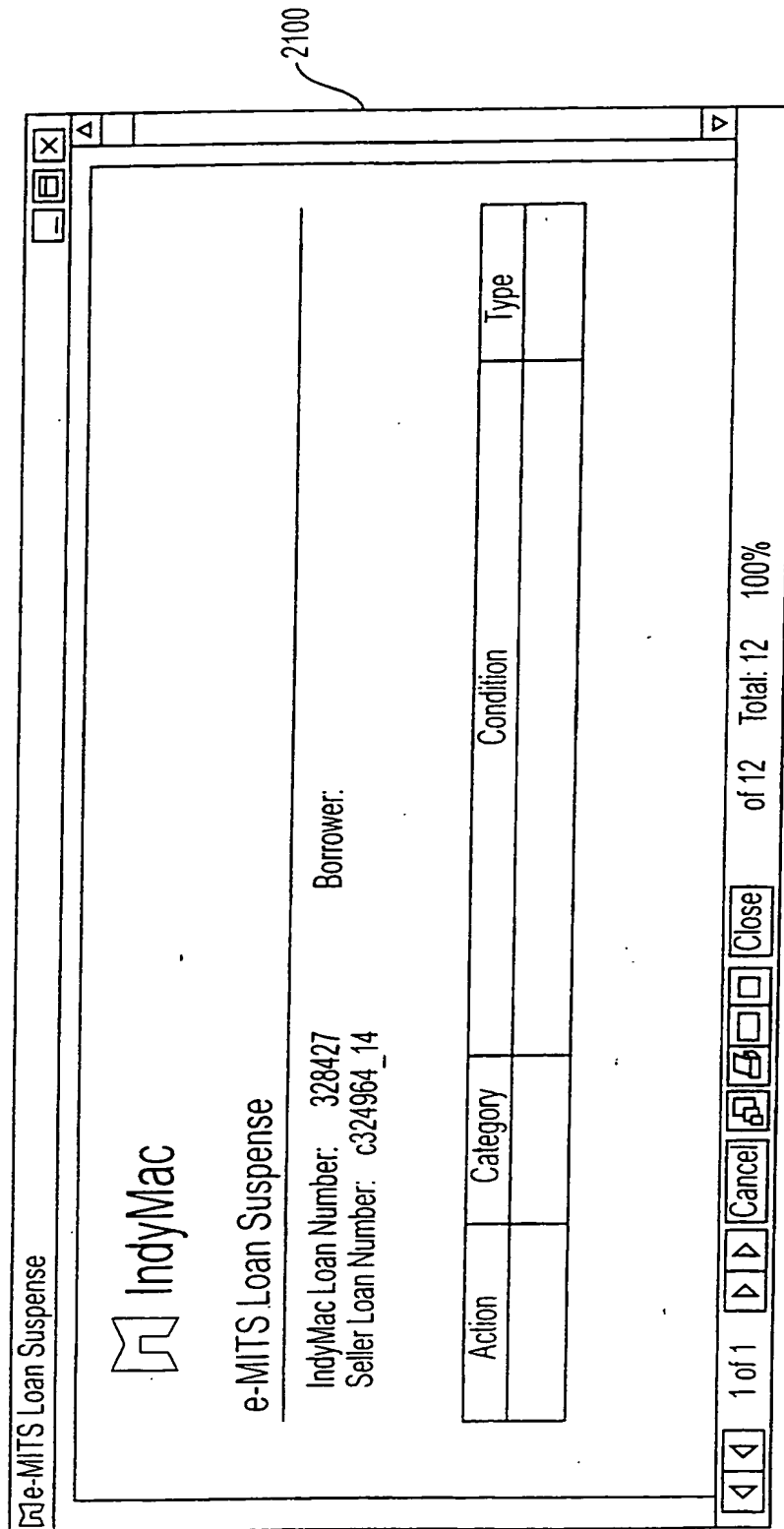
Category	Description
Standard	This loan has been processed by e-MITS Underwriting System as a Prime Loan.
	For data verification please provide the following documents Acco Fastened in a green colored folder. The right side of the folder to include labeled tabs in the following order:
	Legal, Credit, Verification, Appraisal, Title and Miscellaneous.
	Please place the appropriate documents behind each tab. Label the outside of file as e-MITS and include IndyMac Loan Number.
Legal	Please Provide completed Loan Submission Schedule Form 5000.
	Please provide completed 1008 Transmittal Summary.
	Please provide completed typed 1003 Application.
	Please provide completed and signed Initial 1003 Application.
Credit	Please provide Verification of Mortgage for all Mortgage liabilities which are not listed on the credit report.
Verifications: Income	Please provide one current pay-stub which must contain year-to-date, bonus and overtime information.

1 of 1
Cancel
Close

13 of 702
Total: 702
100%

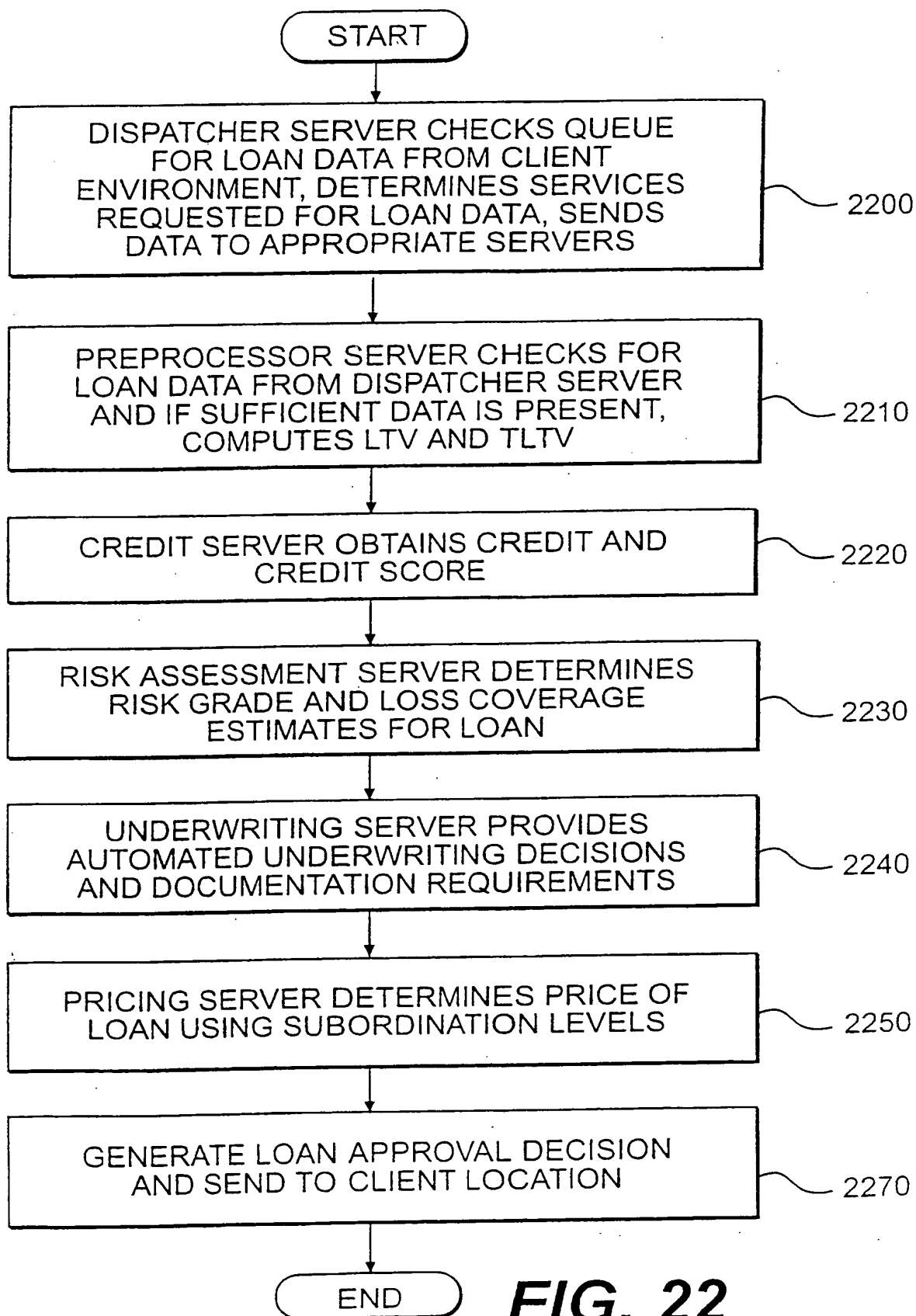
FIG. 20

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**FIG. 21**

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**FIG. 22**

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
13 April 2000 (13.04.2000)

PCT

(10) International Publication Number  
WO 00/21011 A3

(51) International Patent Classification<sup>7</sup>: G06F 17/60

(21) International Application Number: PCT/US99/23223

(22) International Filing Date: 4 October 1999 (04.10.1999)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
09/165,352 2 October 1998 (02.10.1998) US

(71) Applicant: INDYMAC, INC. [US/US]; 155 North Lake Avenue, Pasadena, CA 91101 (US).

(72) Inventors: NISHITH, Sharad; 1120 N. Rose Avenue, Pasadena, CA 91107 (US). GARG, Gulshan; 1036 Thornwood Street, Glendale, CA 91206 (US).

(74) Agents: GARRETT, Arthur, S. et al.; Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., 1300 I Street, N.W., Washington, DC 20005-3315 (US).

(81) Designated States (*national*): AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

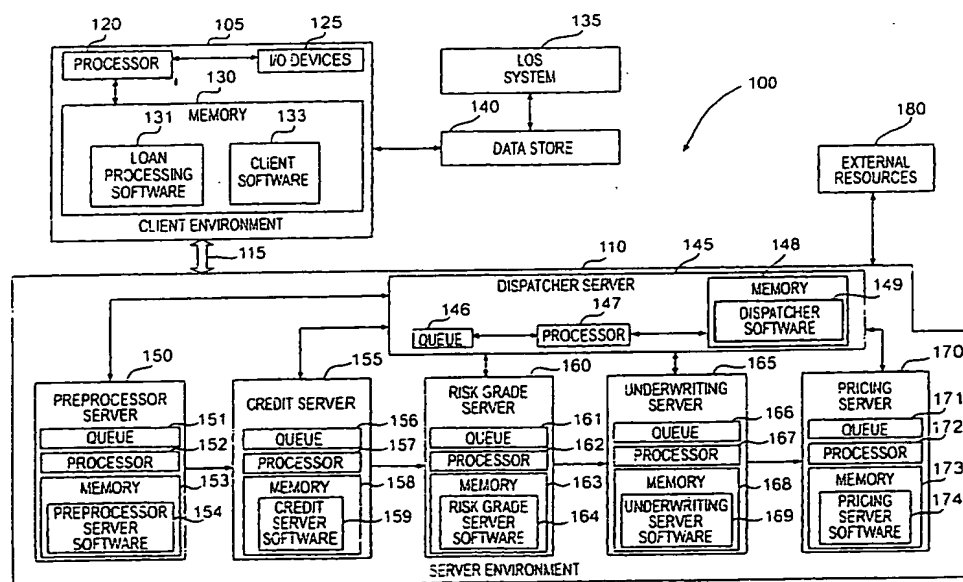
Published:  
— With international search report.

(88) Date of publication of the international search report:  
1 February 2001

(15) Information about Correction:  
Previous Correction:  
see PCT Gazette No. 35/2000 of 31 August 2000, Section II

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR PROCESSING LOANS



(57) Abstract: A system and method for electronically processing loan data uses a graphical user interface that imports data from a loan origination software (LOS) system onto a local terminal and transfers the data to a remote location for processing. The loan imported from the LOS system is initially validated for completeness before being transferred to the remote location. The loan data is processed to generate a loan price and multiple pricing scenarios for the loan. This information is sent back to the local terminal for acceptance. Once accepted, the loan can be rate-locked for a specified period of time.

WO 00/21011 A3



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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*



## INTERNATIONAL SEARCH REPORT

International Application No

PC., US 99/23223

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06F17/60

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, INSPEC, PAJ, IBM-TDB, COMPENDEX

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 611 052 A (THE GOLDEN 1 CREDIT UNION) 11 March 1997 (1997-03-11) abstract column 4, paragraph 2 -column 6, paragraph 2	1-21, 28-39
A	MARLIN S: "Remote Computing Environment Speeds Countrywide's Data Delivery" BANK SYSTEMS AND TECHNOLOGY, vol. 34, no. 11, November 1997 (1997-11), page 46 XP000914012 the whole document	1-21, 28-39
X	WO 97 22073 A (CITIBANK, N.A.) 19 June 1997 (1997-06-19) abstract page 17, last paragraph -page 18, paragraph 1	22-27, 40-69

-/-



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

19 September 2000

Date of mailing of the international search report

27. 10. 2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Skulikaris, I

# INTERNATIONAL SEARCH REPORT

International Application No

PC., US 99/23223

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 797 133 A (JONES R M ET AL) 18 August 1998 (1998-08-18) abstract -----	22-27, 40-69

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 99/23223

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-21, 28-39

loan data processing comprising local loan data input,  
remote loan data processing including approval/disapproval,  
local loan rate fixing

2. Claims: 22-27, 40-69

loan data processing comprising risk analysis, pricing, rate  
selection

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PL./US 99/23223

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5611052 A	11-03-1997	US 6029149 A	22-02-2000
		US 5930776 A	27-07-1999
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WO 9722073 A	19-06-1997	US 6088686 A	11-07-2000
		AU 713746 B	09-12-1999
		AU 1144697 A	03-07-1997
		BR 9611941 A	28-12-1999
		CA 2239713 A	19-06-1997
		CN 1251187 A	19-04-2000
		EP 0954811 A	10-11-1999
-----		-----	
US 5797133 A	18-08-1998	NONE	
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